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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/834,603	04/16/2001	Toru Ishii	2611-0143P	4400
2292	7590	12/17/2003	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			GRIER, LAURA A	
			ART UNIT	PAPER NUMBER
			2644	7

DATE MAILED: 12/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/834,603

Applicant(s)

ISHII, TORU

Examiner

Laura A Grier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13 and 14 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

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DETAILED ACTION

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. **Claims 1-10 and 14** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claim of claims 1-10, recite "characteristics of the sound wave output units". The disclosure fails to provide specific as to what identifies as a characteristic of a sound wave output unit.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 1-10** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 (dependents 2, 4, 5, 7, 10) lines 10-13, refers to correct a signal based the characteristics of the sound wave output units and head of a user *and the characteristics between the sound wave output units*. It is unclear why the latter part of the limitation is needed. It is interpreted as though the correction of the characteristic is between the sound wave output units

and the head of the user, only. The latter claim language of that limitation makes the claim indefinite.

Claim 3, lines 8-10, refers to correct a signal based the characteristics of the sound wave output units and head of a user *and the characteristics between the sound wave output units*. It is unclear why the latter part of the limitation is needed. It is interpreted as though the correction of the characteristic is between the sound wave output units and the head of the user, only. The latter claim language of that limitation makes the claim indefinite.

Claim 6, lines 8-10, refers to correct a signal based the characteristics of the sound wave output units and head of a user *and the characteristics between the sound wave output units*. It is unclear why the latter part of the limitation is needed. It is interpreted as though the correction of the characteristic is between the sound wave output units and the head of the user, only. The latter claim language of that limitation makes the claim indefinite.

Claim 8, lines 8-10, refers to correct a signal based the characteristics of the sound wave output units and head of a user *and the characteristics between the sound wave output units*. It is unclear why the latter part of the limitation is needed. It is interpreted as though the correction of the characteristic is between the sound wave output units and the head of the user, only. The latter claim language of that limitation makes the claim indefinite.

Claim 9, lines 8-10, refers to correct a signal based the characteristics between all of the sound wave output units and head of a user *and the characteristics between all the sound wave output units*. It is unclear why the latter part of the limitation is needed. It is interpreted as though the correction of the characteristic is between the sound wave output units and the head of the user, only. The latter claim language of that limitation makes the claim indefinite.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1-2, 4-5, 7, 9, 11 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over McGrath in view of Weffer, U. S. Patent No. 6263085.

Regarding **claim 1**, McGrath discloses a methods and apparatus for processing spatialized audio. McGrath's disclosure comprises a set of headphones which receives and signal and outputs a sound wave of the input signal (audio input signals), which constitutes as a plurality of sound wave output units arranged a head of a user (figure 1 and col. 5, lines 52-55), a B-format creation system, which may be implemented with a digital signal processor (figure 1 and col. 5, lines 65-67 and col. 6, lines 1-12 and col. 16, lines 1-22,) which indicates a 1st signal processing unit for correcting the signal based on the characteristic of the sound wave output unit and the head of the user. However, McGrath fails to specifically disclose a plurality of sound wave output units arranged around each ear of the head of the user. The examiner maintains that such sound wave output units were well known in the art.

Regarding the sound wave output units, in a similar field, Weffer discloses a set o headphones comprising a plurality of sound output units coupled to each earcup/earpiece (figures 1-4 and col. 4, lines 29-34).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of McGrath by implementing headphones with a plurality of speakers in each earpiece/earcup for the purpose of enhancing a users' listening environment.

Regarding **claim 2**, McGrath and Weffer disclose everything claimed as applied above (see claim 1). McGrath further disclose a headphone structure, which supports the sound wave output units at the circumference of a user (figure 1- references 3 and 4).

Regarding **claim 4**, McGrath and Weffer disclose everything claimed as applied above (see claim 1). McGrath further discloses head track means (col. 5, lines 58-64 and figure 1- reference 9), which constitutes as a plurality of detection units.

Regarding **claim 5**, McGrath and Weffer disclose everything claimed as applied above (see claim 1). McGrath further discloses another processing unit (figure 1 – reference 6), which uses characteristics in which the sound image is fixed in respect to the headphones (col. 6, lines 47-67).

Regarding **claim 7**, the claimed limitations are rejected for the same reasons set forth in the rejection of claim 1.

Regarding **claim 9**, the claimed limitations are rejected for the same reasons set forth in the rejection of claim 1.

Regarding **claim 11**, McGrath discloses a methods and apparatus for processing spatialized audio. McGrath's disclosure comprises a set of headphones which receives and signal and outputs a sound wave of the input signal (a plurality of audio input units), which constitutes as a plurality of sound wave output units arranged about the ear of a user (figure 1 and col. 5, lines 52-55), a B-format creation system, which may be implemented with a digital

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signal processor (figure 1 and col. 5, lines 65-67 and col. 6, lines 1-12 and col. 16, lines 1-22,) which indicates a 1st signal processing unit for correcting the signal based on the characteristic of the sound wave output unit and sound input units. However, McGrath fails to specifically disclose a plurality of sound wave output units arranged around each ear of the head of the user. The examiner maintains that such sound wave output units were well known in the art.

Regarding the sound wave output units, in a similar field, Weffer discloses a set of headphones comprising a plurality of sound output units coupled to each earcup/earpiece (figures 1-4 and col. 4, lines 29-34).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of McGrath by implementing headphones with a plurality of speakers in each earpiece/earcup for the purpose of enhancing a users' listening environment.

Regarding **claim 13**, McGrath and Weffer disclose everything claimed as applied above (see claim 11). McGrath further discloses in figure 2 a plurality of circuits that are used in process for correcting the characteristics of the audio inputs

Allowable Subject Matter

Claims 6 and 8 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

The applicant basically makes remarks in respect to the previous 112 rejection and the fact that art o McGrath fails to teach a plurality of sound output units at each ear of the head of the user. In respect to the remarks of the 112 rejection, the examiner understands and accepts the remarks of the applicant for better clarity, however, the claim is not written or present as so (like in the Remarks, page 12) to provide a better clarification of what is being claimed. Thus the 112 rejection is maintained. And, in respect to McGrath, a new reference of prior art has been provided to support the limitation "a plurality of sound output units at each ear of the head of the user".

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura A Grier whose telephone number is (703) 306-4819. The examiner can normally be reached on Monday - Friday, 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

LAG

December 8, 2003


XU MEI
PRIMARY EXAMINER